

RECIPIENT NAME:University of Illinois

AWARD NUMBER: NT10BIX5570044

DATE: 05/23/2011

OMB CONTROL NUMBER: 0660-0037

EXPIRATION DATE: 12/31/2013

QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS

General Information

1. Federal Agency and Organizational Element to Which Report is Submitted Department of Commerce, National Telecommunications and Information Administration	2. Award Identification Number NT10BIX5570044	3. DUNS Number 041544081
4. Recipient Organization University of Illinois 506 S. Wright St. 364 Henry Admin. Bldg., Urbana, IL 61801-3620		
5. Current Reporting Period End Date (MM/DD/YYYY) 03-31-2011	6. Is this the last Report of the Award Period? <input type="radio"/> Yes <input checked="" type="radio"/> No	
7. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.		
7a. Typed or Printed Name and Title of Certifying Official Michael K Smeltzer Director of Networking	7c. Telephone (area code, number and extension) 2172443835	
	7d. Email Address smeltzer@illinois.edu	
7b. Signature of Certifying Official Submitted Electronically	7e. Date Report Submitted (MM/DD/YYYY): 05-23-2011	

Project Indicators (This Quarter)

1. Please describe significant project accomplishments completed during this quarter (600 words or less).

The were two significant accomplishments on the first quarter of 2011. First, we completed the RFP process for our Fiber-to-the-Premise (FTTP) technology. The recommendation of an Active Ethernet technology resulting from that RFP has been approved by the University of Illinois Board of Trustees, and is pending approval by the State of Illinois Chief Procurement Officer and NTIA. Our grant application had specified a different FTTP technology, but during Due Diligence, NTIA requested that we conduct a technology-neutral RFP, which we did. An Active Ethernet proposal was the winning technology in that RFP.

The second accomplishment was the significant progress on the detailed engineering drawings for our seven fiber backbone rings and the FTTP infrastructure. At the end of the quarter, our engineering firm - Shive-Hattery - was prepared to deliver the 50% drawings in early April (which they did.)

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2a.	Overall Project	2	When we completed the 12/31/2010 PPR report, we believed that we would have completed our engineering as well as purchased our first suite of FTTP equipment for testing purposes. Had our engineering firm finished their design work by 3/31/11 and had we purchased some FTTP equipment by then, we would have obligated a lot more money and been much closer to our forecast percentages for the Overall Project and Network Design.
2b.	Environmental Assessment	100	This is consistent with our baseline plan.
2c.	Network Design	50	<p>Baseline was 100%.</p> <p>The complexity of the UC2B project has resulted in the network designs taking longer than we had previously anticipated. That complexity is exemplified by the fact that we will have three separate construction bid packages and there are multiple points where the multiple construction areas must connect to each other.</p> <p>For two of the areas, we have existing infrastructure to incorporate into the final design, and it turns out that Urbana did not have documentation of its facilities at the level of detail needed for our engineering firm. We had originally hoped to be out to bid by the end of March, but we did not make that self-imposed deadline. To avoid unnecessary waste, we are trying to eliminate as many errors as possible from the drawings before the bidding and those errors turn into costly change orders. We are currently paying a price in time, but hopefully saving money in the long run.</p> <p>Our engineering firm - Shive-Hattery - is on track to deliver the completed construction bid documents in the coming quarter, at which time we will be at 100%.</p>
2d.	Rights of Way	50	<p>Baseline was 100%.</p> <p>We have identified all of the private easements that will be required for rights-of-way and have designed our construction bid documents to take the private easements into account. It will most likely be the 4th quarter of this year before all the private easement issues have been resolved. To allow for the time required for assessments and to secure private easements, the construction in those areas will be scheduled for 2012. Therefore the lack of having the private easements for rights of way will not impact the start of our construction in 2011.</p> <p>Once we determined that we could not complete the private easements</p>

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
			and still build fiber infrastructure in this calendar year, we went with the "easement-free" design alternatives and stopped working on the private easements. We have been totally focused on getting the construction bids out on the street. When that has happened, we will be able to circle back and work on the private easements.
2e.	Construction Permits and Other Approvals	50	Baseline was 100%. We will catch up in the coming quarter. All permit applications have been filed. All IDOT permits were received 4/29/11. Some railroad permits are still outstanding but we expect to receive them in the next quarter as well.
2f.	Site Preparation	0	This is consistent with our baseline plan.
2g.	Equipment Procurement	10	We believe that completing our RFP process for the FTTP electronics was 10% of our overall equipment procurement process. As of 3/31/11 we had not finalized contracts with our FTTP electronics vendor, so we have not actually purchased any equipment. By virtue of completing the FTTP RFP, we believe we are 10% done with the overall equipment procurement process, even though we have not actually purchased any equipment yet.
2h.	Network Build (all components - owned, leased, IRU, etc)	1	This is slightly ahead of our baseline plan.
2i.	Equipment Deployment	0	Baseline was 10%. We will catch up in the coming quarter now that our FTTP electronics RFP process is complete.
2j.	Network Testing	0	This is consistent with our baseline plan.
2k.	Other (please specify):	0	N/A

3. To the extent not covered above, please describe any challenges or issues faced during this past quarter in achieving planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

Our best hope for achieving substantial completion by 1/31/2012 lies in getting our contractors hired and into the field and building infrastructure as soon as possible. We have delayed some other planned activities to focus on starting construction.

With a little cooperation from the weather, 8 of the remaining 10 months before our substantial completion deadline are months during which we could be installing fiber. Our fiber contractors will be highly motivated to get as much of our project completed in 2011 as they possibly can. They would prefer to compete our project before the next construction season if they possibly can. Their profits are tied to their ability to come in, get it built and move onto the next project. We are counting on their natural motivations to help achieve our completion goals.

The weather may not cooperate however. We could have record rain throughout this summer and have an early hard freeze in late October or early November. Both events could delay construction to the point where we will not be able to complete 67% of our project by our substantial completion deadline.

We are also starting to hear of fiber shortages. Once we hire our contractors, we will have a better idea of their access to fiber, and how any fiber shortage may impact our schedule.

Until we know who has won our fiber construction RFP's, we will not know how many crews they will be able to bring to bear on our project. State law requires us to accept the lowest bid by a qualified contractor, and we are not able to only allow contractors with 30 available crews to bid. Fiber construction has the unique ability to be a very parallel process. We have enough work spread over a large enough area that we could actually have 30 crews working at the same time without them getting in each other's way.

In three months when we write the next PPR, we will know more about our chances of attaining substantial completion by 1/31/12. But we do know now that our procurement rules do not allow us to pay early completion bonuses or impose fines for late completion. We will have to work closely with our contractors to instill in them the same sense of urgency that we all have.

To that end, we have retained the services of Bob Miles, a 39-year fiber-construction veteran, to help facilitate quick and quality construction. He has been working closely with our engineering firm to insure that the construction drawings are accurate and will make sense to our contractors. If we have a secret weapon in our race to the finish, it is Bob.

4. Please report the following information regarding network build progress. Write "0" in the Total column and "N/A" in the Narrative column if your project does not include this activity. Unless otherwise indicated in the instructions, figures should be reported cumulatively

from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (600 words or less).

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles deployed	0	This is consistent with our baseline plan.
New network miles leased	0	N/A
Existing network miles upgraded	0	This is consistent with our baseline plan.
Existing network miles leased	0	N/A
Number of miles of new fiber (aerial or underground)	0	This is consistent with our baseline plan.
Number of new wireless links	0	N/A
Number of new towers	0	N/A
Number of new and/or upgraded interconnection points	0	This is consistent with our baseline plan.

For questions 5 and 6 please include information relating to agreements that you are negotiating or have entered into, or that your sub recipient, contractor or subcontractor is negotiating or entered into.

5a. If applicable, please provide the following information with regard to agreements with broadband wholesalers and/or last mile providers as a result of your project.

Indicators	
Number of signed agreements with broadband wholesalers or last mile providers	0
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	0
Average term of signed agreements (in quarters)	0

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers: Until we get signed construction agreements and have established a firm time-line for building our infrastructure, UC2B is not real to wholesale and last mile providers. We know that UC2B will be a retail Internet service provider as well as a Middle-Mile Provider, so on the first day we are in a position to offer services, we know we will have at least one provider – UC2B. Until we have several hundred customers connected, we do not foresee last-mile providers beating a path to our doors to provide their services to a small number of primarily low-income households.

5c. What wholesale services are being provided by this project? Please describe below. As an attachment to this report, please provide pricing plans (in \$ per month) associated with each wholesale service provided by your product (100 words or less). Wholesale services description: We will provide middle- and last-mile wholesale layer-two transport on our Ethernet electronics, as well as provide dark fiber Infeasible Rights of Use (IRU) agreements for 8 local organizations and two state agencies. The Illinois Department of Transportation will use our fiber for monitoring and managing an Intelligent Transportation System. The Illinois Century Network (ICN) provides Internet connectivity to state agencies, schools and local governments. ICN will have BTOP-funded cross-country fiber built to the edges of our community. We have agreed to provide UC2B fiber to connect their fiber to their Point of Presence. (UC2B's Wholesale pricing plan is attached.)

5d. If you have designated a third party to operate all or a portion of your network, please provide the name and contact information for this third party, indicate if this entity is a sub recipient, contractor, and/or subcontractor, and describe with specificity the portion of your network this this third party operates (600 words or less). We have not designated a third party to operate any of our network.

6. Please provide the data according to the type of subscriber. Write "0" in the Total column and "N/A" in the Narrative column if your project does not pass or serve a particular subscriber type. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (300 words or less).

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Broadband Wholesalers or Last Mile Providers	Providers with signed agreements receiving new access	0	Our baseline plan has indicated one signed agreement with a provider with new access in this quarter. We will achieve that in the 3rd quarter of 2011. We have been focused on getting construction started up until now.

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
	Providers with signed agreements receiving improved access	0	Our baseline plan has indicated one signed agreement with a provider getting improved access in this quarter. We will achieve that in the 3rd quarter of 2011. Again, we have been focused on getting construction started up until now.
	Providers with signed agreements receiving access to dark fiber	0	This is consistent with our baseline plan.
	Please identify the speed tiers that are available and the number of subscribers for each	0	We have not begun to offer services yet, and hence there are no Wholesale or Last Mile subscribers. As our Active Ethernet equipment is automatically 1 Gbps, we no longer have any 100 Mbps-based tiers of retail services. Please see attached lists of UC2B Wholesale and Retail Services.
Community Anchor Institutions (including Government institutions)	Total subscribers served	0	This is consistent with our baseline plan.
	Subscribers receiving new access	0	This is consistent with our baseline plan.
	Subscribers receiving improved access	0	This is consistent with our baseline plan.
	Please identify the speed tiers that are available and the number or subscribers for each	0	We have not begun to offer services yet, and hence there are no Community Anchor Institution subscribers. As our Active Ethernet equipment is automatically 1 Gbps, we no longer have any 100 Mbps-based tiers of retail services. Please see the attached lists of UC2B Wholesale and Retail Services.
Residential / Households	Entities passed	0	This is consistent with our baseline plan.
	Total subscribers served	0	This is consistent with our baseline plan.
	Subscribers receiving new access	0	This is consistent with our baseline plan.
	Subscribers receiving improved access	0	This is consistent with our baseline plan.
	Please identify the speed tiers that are available and the number of subscribers for each	0	We have not begun to offer services yet, and hence there are no Residential subscribers. As our Active Ethernet equipment is automatically 1 Gbps, we no longer have any 100 Mbps-based tiers of retail services. Please see the attached list of UC2B Retail Services.
Businesses	Entities passed	0	This is consistent with our baseline plan.
	Total subscribers served	0	This is consistent with our baseline plan.
	Subscribers receiving new access	0	This is consistent with our baseline plan.
	Subscribers receiving improved access	0	This is consistent with our baseline plan.
	Please identify the speed tiers that are available and the number of subscribers for each	0	We have not begun to offer services yet, and hence there are no Business subscribers. As our Active Ethernet equipment is automatically 1 Gbps, we no longer have any 100 Mbps-based tiers of retail services. Please see the attached lists of UC2B Retail Services.

7. Please describe any special offerings you may provide (600 words or less).

All of our customers will have 1 Gbps symmetric Intranet connectivity to each other, and to all local Community Anchor Institutions. While Internet connectivity will be sold in tiers of bandwidth, UC2B Intranet connectivity will be limited only by the port speed of the customer's Optical Network Terminal (ONT), which will be 1 Gbps. This is very similar to the service model deployed by Lafayette, Louisiana in their Fiber-to-the-Premise system.

We are also considering layering a community-wide Wi-Fi service on top of the private Wi-Fi SSID that each of our customers will have. "UC2Bnet" Wi-Fi service would be available anywhere that there was UC2B service and would use the existing Wi-Fi equipment.

UC2B fiber customers and "Wi-Fi only" UC2B customers could access the UC2Bnet wireless service wherever they can get the signal. As UC2B subscriber locations grow, the UC2Bnet Wi-Fi signal will be available in ever increasing areas throughout the community. UC2B "Wi-Fi only" customers would pay a monthly fee that would be less than the lowest rate that a fiber-connected customer pays, and would have access to less Internet bandwidth. Wi-Fi only customers would still have connectivity to all UC2B-connected Community Anchor Institutions and customers at the full speed of their wireless adapter.

8a. Have your network management practices changed over the last quarter? Yes No

8b. If so, please describe the changes (300 words or less).
No Change.

9. Community Anchor Institutions:

Using the table below, please provide a list by service area of the community anchor institutions (including Government institutions) connected to your network as a result of BTOP funds. Figures should be reported for the most recent reporting quarter only (NOT cumulatively). Also indicate whether your organization is currently providing broadband service to the anchor institution. Finally, provide a short narrative description with examples of how institutions are using BTOP-funded infrastructure (300 words or less).

Institution Name	Service Area (town or county)	Type of Anchor Institution (as defined in your baseline)	Are you also the broadband service provider for this institution? (Yes / No)	Narrative description of how anchor institutions are using BTOP-funded infrastructure
N/A	N/A	N/A	N/A	N/A

Project Indicators (Next Quarter)

1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).

During the next quarter, we will release our RFP's for fiber backbone and "fiber-to-the-curb" construction and award those contracts. We will also create the RFP for the construction of fiber from the curb into the buildings and release it late in the quarter. We will finalize the design of our core electronics and begin that procurement process. We will also have an RFP for UC2B's upstream Internet access.

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Planned Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the next reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2a.	Overall Project	16	<p>The baseline plan was 45%.</p> <p>The percentage we have been listing for overall project percentage is directly tied to our expenditures. In the coming quarter we will pay the bulk of our engineering fees and will purchase all of our network core equipment and the first wave of our FTTP electronics. Construction may actually start by the end of the next quarter, but there will be little if any contractor expenses on our books by June 30th.</p> <p>With our original Baseline Plan and with each PPR we have attempted to predict the future as requested by NTIA. What we have consistently shown is that we are not very accurate at predicting the future. We are boldly going into the woods where no one has ever gone before. There are no models for us to study and learn from to help in predicting our future progress. There has never been a project quite like UC2B with its mix of Middle-Mile and Last-Mile components, and with two local municipalities and a major university as partners behind the wheel.</p> <p>We are doing everything we can to make our completion deadlines.</p>
2b.	Environmental Assessment	100	This is consistent with our baseline plan.
2c.	Network Design	100	This is consistent with our baseline plan.
2d.	Rights of Way	80	The baseline plan was 100%. We do not expect to complete the negotiations for private easements until the 4th quarter of 2011.

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2e.	Construction Permits and Other Approvals	100	This is consistent with our baseline plan.
2f.	Site Preparation	0	The baseline plan was 100%. Until we start construction there will not be any site preparation. When we did the baseline plan, we predicted (inaccurately) that we would begin fiber construction in the second quarter. It now appears that we will not begin in earnest until the 3rd quarter.
2g.	Equipment Procurement	50	Baseline was 60%. The Baseline Plan inaccurately predicted that we would have purchased more equipment in the next quarter than it now looks like we will purchase. As network electronics are constantly being updated and improved by the vendors, within reason, there is value in purchasing the electronics "just-in-time" for when they will be needed for deployment. We will only purchase network equipment as we need it. There will be significant expenditures in the third quarter as we begin to populate the FTTP neighborhood cabinets. We will purchase our core electronics in the coming quarter, but the bulk of our FTTP electronics will not be purchased until the 3rd quarter. We should be back on target in this area by the end of the 3rd quarter.
2h.	Network Build (all components - owned, leased, IRU, etc.)	2	The baseline plan was 30%. We are at least 3 months behind where we predicted we would be in terms of construction. Some of that is attributable to the time and effort that was expended on the Environmental Assessment. Some of that is attributable to the complexity of our project and that it has taken our engineering firm more time than they estimated to complete our drawings. Some of that is attributable to time spent on reviewing the fiber backbone design at the request of one of our municipalities. Some of that is attributable to our poor ability to accurately predict the future. We will make significant progress in this area in the third quarter.
2i.	Equipment Deployment	50	The baseline plan was 60%. We are at least 3 months behind where we predicted we would be in terms of equipment deployment. Some of that is attributable to the time and effort that was expended on the Environmental Assessment. Some of that is attributable to the complexity of our project and that it has taken our engineering firm more time than they predicted to complete our drawings. Some of that is attributable to time spent on reviewing the fiber backbone design at the request of one of our municipalities. Some of that is attributable to our poor ability to accurately predict the future. We will deploy our core electronics in the coming quarter, but the bulk of our FTTP electronics will not be deployed until the 3rd quarter. We should be back on target by in this area by the end of the 3rd quarter.
2j.	Network Testing	0	Baseline plan was 25%. With the delay in construction, there will be no network to test until the 3rd quarter.
2k.	Other (please specify):	0	N/A

3. Please describe any challenges or issues anticipated during the next quarter that may impact planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

As has been previously discussed the Environmental Assessment slowed us down by some six months as we could not incur non-EA-related expenses until after receiving our Finding of No Significant Impact. Also previously discussed has been the complexity of our project. We grossly underestimated the time it would take to complete some tasks. There has been constant effort, but the targets we established in the Baseline Plan were not realistic.

It has also taken our engineering firm far more time than they estimated to complete their detailed fiber construction drawings. It was a challenge to get some of the participants in this project to stop trying to optimize this or that. Even when we established a firm date for no more changes, not everybody honored that request. One of our municipalities requested a review of the fiber backbone design before allowing the engineering firm to seriously start their design efforts.

But at the end of the day, the single biggest contributor to the variance between our projected completion percentage and our actual for any of these categories is that we lacked tools to more accurately predict how long individual steps would take to complete. While some activities need to be done serially, some can be done in parallel if you have a lot of equally qualified people to work in parallel.

UC2B is a lean and mean operation, which is good for containing expenses, but it is bad in that we sometimes have human choke points. This time crunch will hopefully pass once we get into the construction phase, but some days there are not enough human cycles to do all the things that need to be done.

Infrastructure Budget Execution Details

Activity Based Expenditures (Infrastructure)

1. Please provide details below on your total budget, cumulative actual expenditures (for the period ending the current quarter), and cumulative anticipated expenditures (for the period ending next quarter) for each line item, including detailed disbursements of both matching funds and federal funds from project inception through end of this quarter (actual) or next quarter (anticipated). Actual and anticipated figures should be reported cumulatively from award inception to the end of the applicable reporting quarter.

Budget for Entire Project				Actuals from Project Inception through End of Current Reporting Period			Anticipated Actuals from Project Inception through End of Next Reporting Period		
Cost Classification	Total Cost (plan)	Matching Funds (plan)	Federal Funds (plan)	Total Cost	Matching Funds	Federal Funds	Total Costs	Matching Funds	Federal Funds
a. Administrative and legal expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
b. Land, structures, right-of-ways, appraisals, etc.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Relocation expenses and payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Architectural and engineering fees	\$254,990	\$0	\$254,990	\$430,772	\$0	\$430,772	\$1,800,000	\$900,000	\$900,000
e. Other architectural and engineering fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
f. Project inspection fees	\$783,992	\$0	\$783,992	\$0	\$0	\$0	\$0	\$0	\$0
g. Site work	\$33,500	\$0	\$33,500	\$0	\$0	\$0	\$0	\$0	\$0
h. Demolition and removal	\$74,880	\$0	\$74,880	\$0	\$0	\$0	\$0	\$0	\$0
i. Construction	\$23,499,307	\$6,852,149	\$16,647,158	\$287,221	\$152,548	\$134,672	\$500,000	\$300,000	\$200,000
j. Equipment	\$4,722,756	\$0	\$4,722,756	\$0	\$0	\$0	\$2,400,000	\$0	\$2,400,000
k. Miscellaneous	\$17,500	\$0	\$17,500	\$10,735	\$0	\$10,735	\$12,000	\$0	\$12,000
l. SUBTOTAL (add a through k)	\$29,386,925	\$6,852,149	\$22,534,776	\$728,728	\$152,548	\$576,179	\$4,712,000	\$1,200,000	\$3,512,000
m. Contingencies									
n. TOTALS (sum of l and m)	\$29,386,925	\$6,852,149	\$22,534,776	\$728,728	\$152,548	\$576,179	\$4,712,000	\$1,200,000	\$3,512,000

2. Program Income: Please provide the program income you listed in your application budget and actuals to date through the end of the reporting period.

a. Application Budget Program Income: \$0	b. Program Income to Date: \$0
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